CLAIMS

1. Biosafety cabinet (BSC) comprising walls (1-5) defining a work space, characterized in that it comprises an optical device placed outside the work space and allowing observation of a sample in at least one zone of the work space via a transparent window that is integral with one of said walls.

2. BSC according to claim 1, characterized in that it comprises a plate (6) for receiving the sample in said observation zone of the work space, said plate comprising a first transparent window (7) for illuminating and/or observing said sample.

3. BSC according to claim 1 or claim 2, characterized in that the floor (1) of the work space comprises one or more zones provided with temperature regulating means for thermostatting to a temperature in the range 20°C to 45°C, in particular 37°C ± 0.2°C.

4. BSC according to claim 2 or claim 3, characterized in that the plate (6) is provided with temperature regulating means to fix the temperature at its surface between 20°C and 45°C, in particular 37°C ± 0.2°C.

5. BSC according to one of claims 1 to 4, characterized in that the optical observation device comprises illumination means (8) for illuminating the sample in the observation zone and light collecting means (9) allowing a sample placed in said zone to be observed.

6. BSC according to claim 5, characterized in that the light collecting means (9) comprises an autofocusing camera.

7. BSC according to claim 5 or claim 6, characterized in that the light collecting means are placed beneath the first window (7) of the plate (6).

8. BSC according to claim 5 or claim 6, characterized in that all or a portion of the illumination means and/or light collecting means are located behind one or more

windows distinct from the first window (7) and integral with at least one of the walls, in particular the upper wall (4).

9. BSC according to any one of claims 5 to 8, characterized in that the light collecting device (9) is arranged to allow a plurality of image magnifications of between 10 and 1000, in particular between 10 and 400.

10. BSC according to claim 9, characterized in that the light collecting means (9) further comprise a system for fine adjustment at each magnification.

11. BSC according to claim 10, characterized in that the fine adjustment system is controlled from a control panel (10) located outside the work space and/or integral with one of the walls defining the work space.

12. BSC according to any one of claims 5 to 11, characterized in that the light collecting means (9) are connected to a device for recording the images collected.

13. BSC according to claim 12, characterized in that the image recording device is a computer provided with data storage means.

14. BSC according to any one of claims 5 to 13, characterized in that it comprises an observation screen (11) integral with one of the walls defining the work space, said screen allowing the images collected by the light collecting means (9) to be viewed.

15. BSC according to claim 14, characterized in that the observation screen (11) is a flat screen integrated with the rear wall (3) of the work space.

16. BSC according to any one of claims 1 to 15, characterized in that it further comprises a sample gassing zone comprising a gas inlet (12), a chamber for confining gas (13) and a connection device (14) connecting said gas inlet (12) to said chamber (13).

17. BSC according to claim 16, characterized in that the chamber (13) and the connection device (14) connecting the gas inlet (12) to said chamber (13) can readily be dismantled.

18. BSC according to claim 17, characterized in that the chamber (13) and the connection device (14) connecting the gas inlet (12) to said chamber (13) are separate parts.

19. BSC according to one of claims 16 to 18, characterized in that the gas inlet (12) is integral with one of the vertical walls (2) and (3) defining the work space, and in that the chamber (13) is a transparent bell jar connected to the gas inlet (12) via a tube.

20. BSC according to one of claims 16 to 19, characterized in that the connection device (14) connecting the gas inlet to the chamber comprises a protective flange (15) to protect the gas inlet (12) from splashes.

21. BSC according to any one of claims 1 to 20, characterized in that it further comprises data capture means.

22. BSC according to claim 21, characterized in that said data capture means comprise a touch sensitive keypad (16) integral with the floor (1) defining the work space.

23. BSC according to claim 21, characterized in that said data capture means comprise a screen and a track pad controlling a pointer, said track pad being integral with the floor (1) and said pointer being able to activate predefined keys appearing on the screen.

24. BSC according to any one of claims 21 to 23, characterized in that the data capture means are connected to a computer.

25. BSC according to any one of claims 1 to 24, characterized in that the walls (1-5) defining the work space are flat and constituted by smooth washable materials that are resistant to cleaning products.

26. BSC according to any one of claims 1 to 25, characterized in that the floor (1) is constituted by one or more elements that can be dismantled and are disposable or sterilizable in an autoclave.

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NOTA BENE :

- **GV = Germinal Vesicle**
- **M= Metaphase**
- **PB = Polar Body**
- **PN = Pronucleus**